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Subject	Puerto Rico Landfill Initiative	Location	Street Address: City: State: NY Zip Code:
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Issue

The majority of Puerto Rico's landfills are past or near capacity and may present an imminent and substantial threat to human health and the environment. Minimal municipal solid waste recycling programs are in place. Although the Puerto Rico Environmental Quality Board (EQB) is approved to implement permitting and enforcement within the RCRA solid waste program, EQB has largely not addressed non-compliant landfills via enforcement actions. Similarly, the Puerto Rico Solid Waste Management Authority has not implemented any of the solid waste management plans proposed over the last 15 to 20 years. In addition, the existing PR solid waste regulations are not consistent with Federal requirements.

Current Status

Regulatory Changes

In February 2010, EQB transmitted to EPA draft proposed revisions to its existing solid waste regulations per our recommendations. EPA has reviewed these proposed revisions for consistency with the federal requirements and found that only minor additional modifications are necessary for federal consistency. A letter requesting that EQB adopt the proposed revisions was sent in January 2011. The changes have not been officially adopted.

EPA Case Update

EPA ordered closure of six municipal landfills using RCRA 7003 imminent and substantial endangerment authority, and will take additional actions in FY13 and beyond. Two landfills are currently the subject of-CAA and RCRA Judicial Referrals.

- **Aguadilla Landfill:**

The Aguadilla Landfill was an unlined municipal open dump, located in karst. Under a 2007 RCRA 7003 Order on Consent (AOC), the landfill was closed in September 2010 (the Municipality of Aguadilla, Owner, and Land-Tech, Operator, were the Respondents). Post closure care under the 2007 AOC continues.

- **Vega Baja Landfill:**

The Vega Baja Landfill is an unlined municipal open dump, located in/adjacent to wetlands. The landfill is wholly located on PR Land Authority property. The Municipality of Vega Baja, Owner, and La Vega Landfill & Resources, Inc., Operator, are the Respondents in the 2012 landfill closure Consent Order.

New (9/12) RCRA 7003 Order on Consent (AOC) includes cessation of waste by July 1, 2013, phased closure of the existing landfill cell, landfill gas collection and control, acceptance of waste from Florida, construction of a new fully compliant expansion cell, and a comprehensive recycling program in and around Vega Baja. A new Unilateral Order for the property owner, the PR Land Authority, is being finalized for issuance.

- **Toa Baja Landfill:**

The Toa Baja Landfill is a large, unlined municipal open dump, located in karst, with nearby residential communities. The landfill is partially located on GSA (former Navy Base) property. The Municipality of Toa Baja, Owner, and Land-Tech, Operator, are the Respondents in the landfill closure Consent Order and 2012 Amendment. The PR Land Authority, as past owner, is a Respondent under a 2007 Unilateral Order.

The Amended RCRA 7003 AOC includes cessation of waste by September 30, 2014, landfill gas collection and control, gas to energy, photovoltaics, construction of a new fully compliant expansion cell, and a comprehensive recycling program in and around Toa Baja.

- **Florida Landfill:**

The Florida Landfill is a small, poorly designed and operated, unlined municipal open dump, located in karst, with nearby drinking water wells. The Municipality of Florida, Owner (AOC), and Waste Disposal Management Inc., Operator (Unilateral AO), were the Respondents in separate Orders for landfill closure.

Compliance schedule stayed. The Municipality invoked dispute resolution based on inability to pay issues. Cessation of waste receipt and implementation of closure at the Florida Landfill was deferred until resolution of the situation at the Vega Baja Landfill (resolved) which is prepared to accept Florida's waste at below market rate. An amended AOC is being proposed to establish a new compliance schedule and to require recycling. We anticipate that Florida and Vega Baja will sign a contract for acceptance of Florida waste and that Florida will sign an amended AOC.

- **Juncos Landfill:**

The Juncos Landfill is a moderately large, municipally-owned and operated, unlined open dump with

significant, long term non-compliance issues. The Municipality of Juncos, Owner and Operator, is the Respondent in the 2012 landfill closure Administrative Consent Order.

The RCRA 7003 AOC includes cessation of waste by December 31, 2014, landfill gas collection and control, gas to energy, photovoltaics, construction of a new fully compliant expansion cell, and a comprehensive recycling program in and around Juncos.

- **Arecibo Landfill:**

The Arecibo Landfill borders the Caño Tiburones, an environmentally-sensitive wetland and natural reserve. RCRA injunctive relief sought includes: slope stabilization; flood protection; stormwater run-on/off controls; leachate controls; halting wetland encroachment; removal of solid waste (e.g., junked autos) from wetland; site security; pathogen control; financial assurance for closure; and proper closure when capacity is reached.

Referred to DOJ June 2009. DOJ delivered a *Pre-filing Settlement Opportunity* summarizing potential claims under CAA and RCRA to Respondents, Municipality of Arecibo, Land-Tech, and the Puerto Rico Land Authority in March 2010. The letter set forth the injunctive relief EPA/DOJ seeks under CAA (e.g., build a gas collection and control system) and RCRA and included substantial CAA penalties. A final draft consent decree was sent to Defendants on February 10, 2012. Respondents made a penalty offer and provided a refined recycling plan at the end of March 2012. In November, 2012, a new mayor was elected and this has delayed the execution of the negotiated Consent Decree.

- **Santa Isabel Landfill:**

The Santa Isabel Landfill is a small, municipally-owned and operated, unlined open dump with persistent, long term non-compliance issues. The Municipality of Santa Isabel, Owner and Operator, and two past operators were Respondents in the original 2007 landfill closure Consent Order. A September 2011 AOC, with the Municipality of Santa Isabel as Respondent, replaced and supplemented, by adding comprehensive recycling provisions, the 2007 Order. The 2011 Order required closure of the Landfill in three annual phases, beginning in December 2011, and included comprehensive recycling provisions.

Respondent Municipality of Santa Isabel was referred to DOJ in June 2012 for noncompliance with the 2011 AOC.

Interest from Elected Officials

Concerns were expressed to then Resident Commissioner and current Governor Fortuno by former EPA Regional Administrator Steinberg, and in October 2009 Administrator Jackson met with Governor Fortuno and EQB Chairman Nieves to reiterate these concerns.

Options & Recommendations

Encourage the Governor to ensure that SWMA provides funding to the municipalities to aid landfill closures;

Encourage development and implementation of an island-wide, up-to-date, solid waste management plan;

Request that EQB adopt the proposed revisions to its existing solid waste regulations;

As a delegated solid waste program, EQB must implement its solid waste permitting and compliance sections to meet its authorization obligations.

Background

The Environmental Quality Board (EQB), responsible for permitting and compliance of landfills in Puerto Rico, remains ineffective in its regulatory and enforcement role. Many of the 29 operating landfills are not permitted, the majority are past or near capacity (62% past capacity), and years of enforcement actions by EQB have not resulted in significant improvements in compliance. EPA has inspected operating landfills and found pervasive noncompliance. Most significantly, few of the landfills have liners or leachate controls, and several are located in karst terrain, exacerbating the risk of ground water contamination.

EQB substantively modified its solid waste management regulations in 1997 without notifying EPA as required. EPA performed a comparison of the revised regulations against the 1993 regulations upon which Puerto Rico's program approval was based. Region 2 expressed its concerns about the regulatory changes and the potential jeopardy of Puerto Rico's program approval status to EQB and the Puerto Rico Governor's office numerous times since 2006.

In addition, EQB has eliminated or left open all central solid waste compliance and permitting staff positions. In 2000, EQB employed 14 central solid waste compliance and permitting staff, by 2005, it had been reduced to 5 (with expanded responsibilities). In 2010, staffing was reduced to 1. By 2012, EQB employed no central solid waste compliance and permitting staff.

The Puerto Rico Solid Waste Management Authority (SWMA), responsible for planning and infrastructure, has been severely challenged in addressing the mounting capacity, recycling, and compliance issues. Its 2007 Dynamic Itinerary for Infrastructure Projects (DIIP) laid out three management scenarios, none of which has been implemented.

RCRA Orders

EPA has issued RCRA Section 7003 Consent Orders to close six landfills: Aguadilla, Florida, Juncos, Santa Isabel, Toa Baja, and Vega Baja. The Agency also issued three unilateral administrative orders against Respondents who would not sign the Florida, Vega Baja, and Toa Baja Orders. In addition, EPA has issued stipulated penalty letter to several Respondents, and in June 2009 made a civil/judicial referral to DOJ to compel compliance with both RCRA and CAA requirements at the Arecibo landfill.

CAA Issues

In addition, Puerto Rico's landfills have not complied with the CAA regulatory requirement to determine whether their emissions trigger the need for an operating permit (however, the CAA regulations do not require a landfill to close to install the equipment required when such triggers are met).

The landfills are also significantly non-compliant with new source performance standards emission guidelines, and the maximum achievable control technology regulations. However, the lack of permits has led to insufficient reporting on design capacity and emissions, rendering EPA unable to determine whether the landfills are required to install certain equipment. There are approximately 33 active and 35 closed municipal solid waste landfills that may be subject to federal CAA regulations. A Notice of Violation and Compliance Order has been drafted for the San Juan landfill - one of five landfills identified as potentially high priority violators - for monitoring, reporting and record keeping violations (the Ponce, Arecibo, Toa Baja, and Carolina landfills were also identified as potential high priority violators). The Ponce and Arecibo landfills have been referred to DOJ for multiple violations, and the CAA requirements for the Toa Baja landfill are being addressed under the existing RCRA order as of December 2010. EPA (CEPD) is currently evaluating the Moca Landfill and Carolina Landfill to determine whether there are any CAA violations.

Recycling Infrastructure

EPA launched the PR Recycling Partnership in 2010 to facilitate waste reduction and recycling in the Commonwealth. The group had its inaugural meeting in April 2010 and has since conducted monthly conference calls. EPA has worked closely with SWMA to improve its solid waste management infrastructure, and continues to offer assistance through technical review/guidance, grants, workshops and conferences cosponsored with SWMA (such as the 2007 Waste to Energy conference and the 2008

Recycling conference). Most recently, EPA funded the development of the Puerto Rico Materials Exchange Web site - a virtual marketplace that enables users to trade recyclable materials online, and sponsored a training workshop during its launch in April 2009. The goal is to facilitate waste diversion and increase materials reuse and recycling, promote green jobs and economy, and reduce greenhouse gas emissions. The Web site currently has 124 members with 342 listings. EPA has been performing additional outreach to increase use of this waste diversion tool.

In addition, recent EPA RCRA Consent Orders with municipal landfill owner/operators have included the development and implementation of mandatory municipal recycling (*e.g.*, Juncos, Vega Baja, Santa Isabel, and Toa Baja).
